

## Notice of Allowability

Application No.

10/015,848

Examiner

Jason M. Perilla

Applicant(s)

PAYNE ET AL.

Art Unit

2611

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to the amendment filed May 18, 2007.
2. ☒ The allowed claim(s) is/are 1, 2, 6, 8, 10, 11, 13, and 16 renumbered respectively as claims 1-8.
3. ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
  - a) ☒ All b) ☐ Some\* c) ☐ None of the:
    1. ☒ Certified copies of the priority documents have been received.
    2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
    3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

\* Certified copies not received: \_\_\_\_\_.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

**THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.**

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
  5. ☒ CORRECTED DRAWINGS ( as "replacement sheets") must be submitted.
    - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review ( PTO-948) attached
      - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date \_\_\_\_\_.
    - (b) ☒ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date 20070611.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

### Attachment(s)

1. ☐ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☐ Information Disclosure Statements (PTO/SB/08),  
Paper No./Mail Date \_\_\_\_\_
4. ☐ Examiner's Comment Regarding Requirement for Deposit  
of Biological Material
5. ☐ Notice of Informal Patent Application
6. ☒ Interview Summary (PTO-413),  
Paper No./Mail Date 20070611.
7. ☒ Examiner's Amendment/Comment
8. ☐ Examiner's Statement of Reasons for Allowance
9. ☐ Other \_\_\_\_\_

### EXAMINER'S AMENDMENT

1. Claims 1, 2, 6, 8, 10, 11, 13, and 16 are pending in the instant application.
2. An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR § 1.312. To ensure consideration of such an amendment, it **MUST** be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview with James Dobrow on June 11, 2007.

The application has been amended as follows wherein the following versions of claims 1, 2, and 13 replace all prior versions in their entirety:

Claim 1: A method, comprising:

determining a bit value of a demodulated signal, in which N previously detected bits (where N is at least 2) of a demodulated bit stream are used to select which one of a plurality of threshold levels against which a current demodulated bit is to be compared in a bit slicer and is to be updated using the current demodulated bit;

subtracting the demodulated signal from one of a plurality of selected preset default values to produce a current dc offset estimate, deriving a mean dc offset estimate from the current dc offset estimate and a plurality of preceding dc offset estimates, combining the mean dc offset estimate with the selected threshold value and applying the combined signal to a threshold input of the bit slicer

adjusting a responsiveness of the mean dc offset estimate with respect to drift;

oversampling the demodulated ~~bit stream~~ signal by a factor M, where M is an integer on the order of 20;

intermittently integrating at least one sample in the vicinity of the M/2 sample of each of at least 2 bit periods of the demodulated signal to generate a demodulated signal to be compared with the selected one of the threshold values;

comparing a result of the integrating with the selected threshold level; and  
using the result to update the selected threshold value.

Claim 2: A method as claimed in claim 1 further comprising: providing P (where P is at least 2) mean estimators associated with each of the threshold levels, and for a selected one of the plurality of threshold levels obtaining an average value of the associated P mean estimators and using the result as the ~~current~~ selected one of the threshold values.

Claim 13: A receiver having a variable threshold slicer, comprising means for deriving a demodulated bit stream, means for storing a plurality of threshold values, each of the plurality of threshold values being selectively adjustable, means for selecting one of the plurality of threshold values for ~~comparison with~~ determining a current bit and for adjustment of the selected threshold value in response to a sequence of N bits (where N is at least 2) including bits received prior to the current bit and means for using the current bit to update the selected threshold value; and

means for subtracting ~~the~~ a demodulated signal from a selected preset default value to produce a dc offset estimate, means for deriving a mean dc offset estimate from a current dc offset estimate and a plurality of preceding dc offset estimates, and means for combining the mean dc offset estimate with the selected one of the plurality of threshold values and for applying the combined signal to a threshold input of the variable threshold bit slicer;

means for adjusting the responsiveness of the mean dc offset estimate with respect to drift; and

means for oversampling the demodulated ~~bit-stream~~ signal by a factor M, where M is an integer on the order of 20, and means for intermittently integrating at least one sample in the vicinity of the M/2 sample of each of at least 2 bit periods of the demodulated signal to generate a ~~demodulated~~ signal to be compared with the selected one of the plurality of threshold values;

~~wherein the means for deriving the demodulated bit stream includes a non-continuous integrate and dump stage for integrating the demodulated bit stream over a~~

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~~predetermined number of bit periods and supplying a result to the variable threshold bit slicer and to the means for updating the selected threshold value.~~

**Claims 1, 2, 6, 8, 10, 11, 13, and 16 are renumbered respectively as claims 1-8, and the claim dependency is renumbered accordingly.**

### ***Abstract***

The abstract is amended as follows, in line 9, --(Figure 7 -- not shown)-- is stricken and, in line 12, (Figure 1) is stricken. Furthermore, the two paragraphs of the abstract are combined into one by removing the break between them.

### ***Drawings***

3. The following changes to the drawings have been approved by the examiner and agreed upon by applicant:

- a. Clean drawing sheets (3/6, fig. 4 and 6/6, fig. 7) submitted July 6, 2005 having every reference block labeled as attached.

In order to avoid abandonment of the application, applicant must make these above agreed upon drawing changes.

### ***Allowable Subject Matter***


4. Claims 1, 2, 6, 8, 10, 11, 13, and 16 renumbered respectively as claims 1-8 are allowed.

### ***Conclusion***

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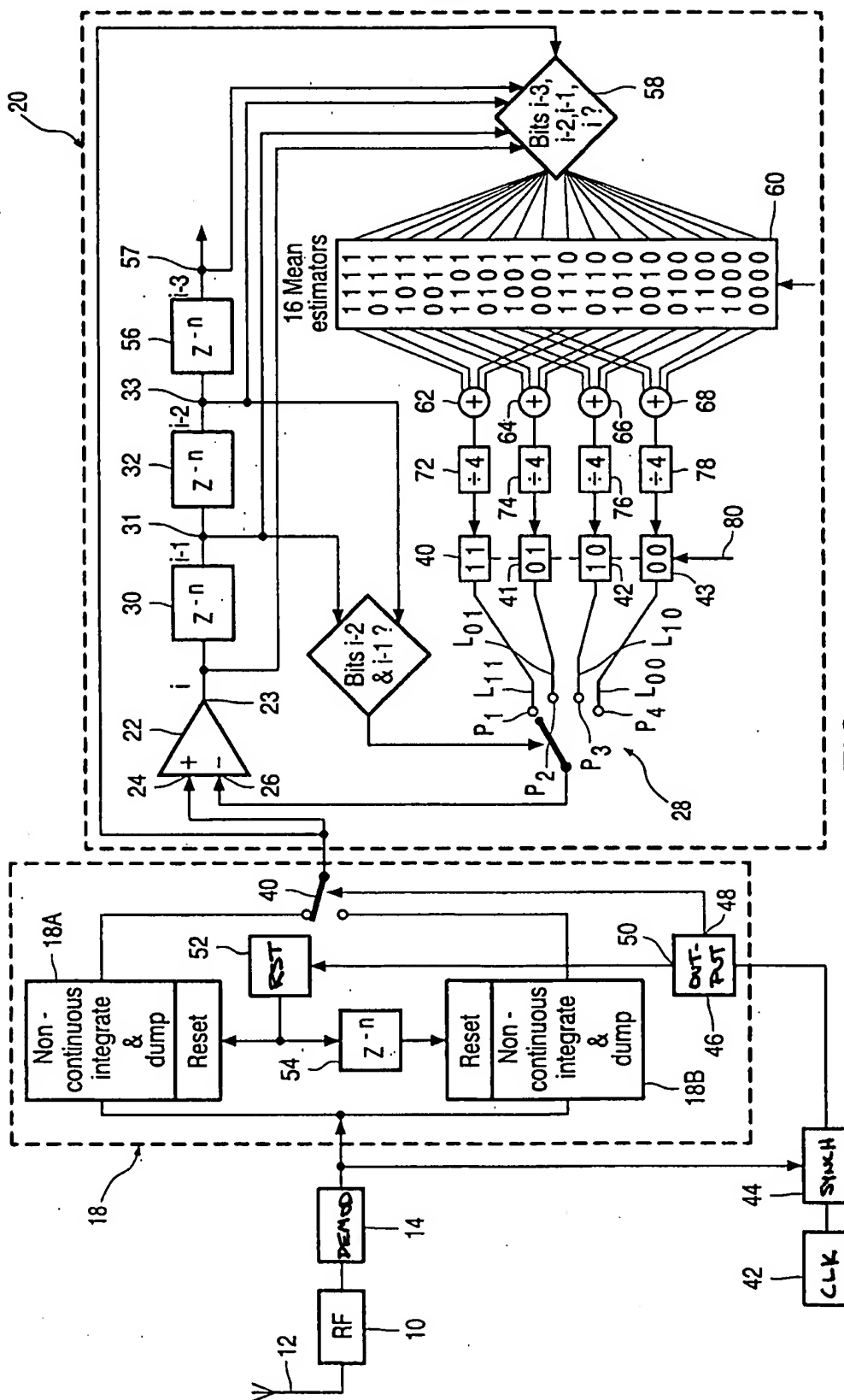
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Chieh M. Fan can be reached on (571) 272-3042. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

  
Jason M. Perilla  
June 11, 2007

jmp

  
CHIEH M. FAN  
SUPERVISORY PATENT EXAMINER



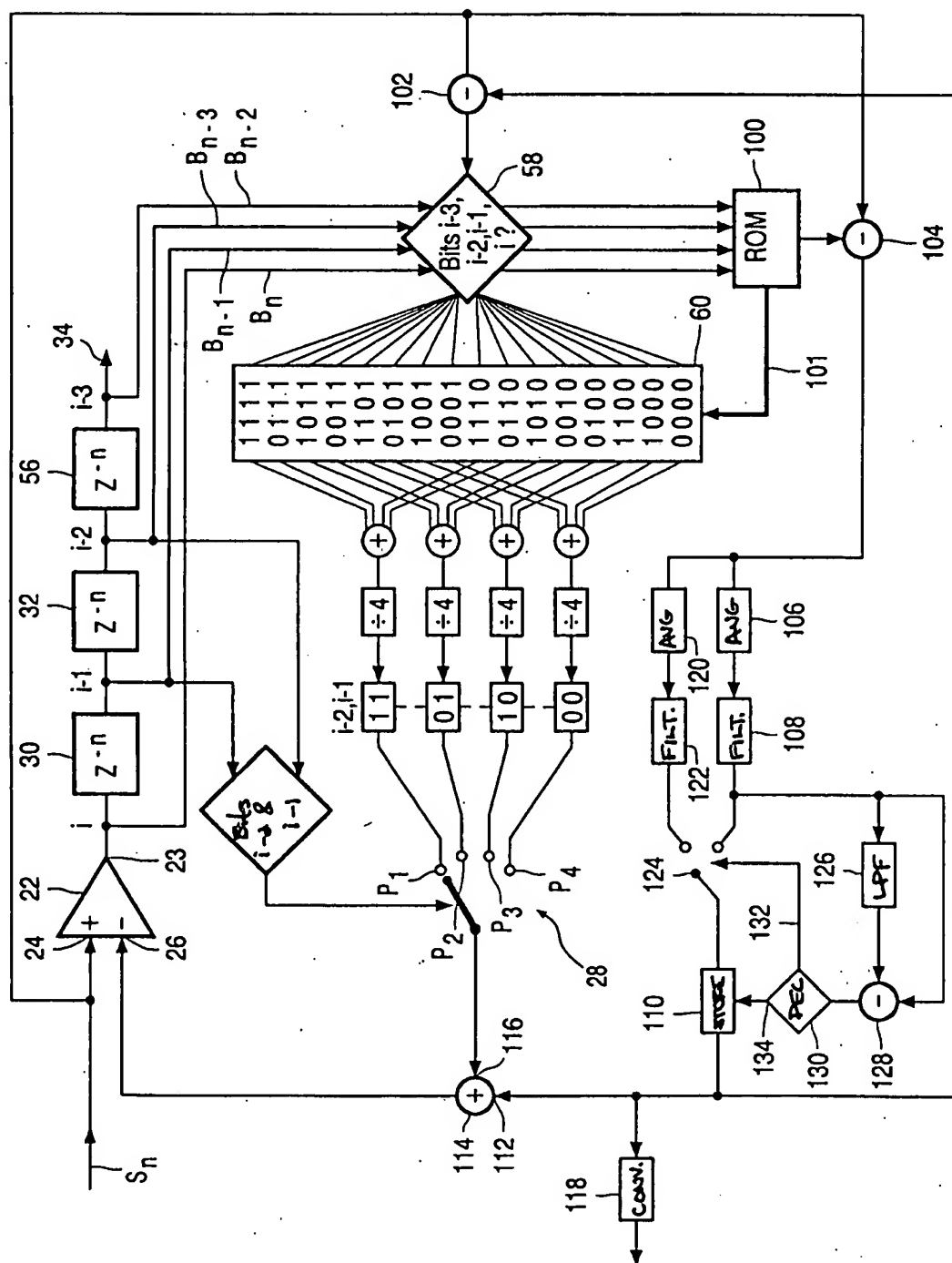


FIG. 7